



Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 1 of 1

Complete if Known

Application Number	09/944,049
Filing Date	August 30, 2001
First Named Inventor	Schall, Thomas J.
Art Unit	1648
Examiner Name	Mosher, Mary
Attorney Docket Number	019934-002510US

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U.S. PATENT DOCUMENTS+

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code ² (if known)			
MM ↓	A1	US-4,243,805	01/06/1981	Protiva et al.	
	A2	US 2002-0127544 A1	09/12/2002	Schall et al.	

FOREIGN PATENT DOCUMENTS

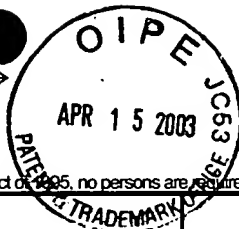
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				
MM	B1	PCT	WO 02/062296	A2	08/15/2002	ChemoCentryx, Inc.		<input type="checkbox"/>
								<input type="checkbox"/>

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
MM	C1	BEERS, M. et al. <u>The Merck Manual of Diagnosis and Therapy</u> , 17th Ed., 1999, pp. 1294-1296, Published by Merck Research Laboratories.	
	C2	HARDMAN, J. et al. Goodman & Gilman's <u>The Pharmacological Basis of Therapeutics</u> , 9th Ed., 1996, p. 51, 57-58, McGraw-Hill, printed in the U.S.A.	
	C3	HORUK, R. "Molecular properties of the chemokine receptor family", <u>Trends Pharm. Sci.</u> , Vol. 15, (1994), pp. 159-165.	
	C4	SCHALL, T.J. et al., "Chemokines, leukocyte trafficking, and inflammation", <u>Curr. Opin. Immunol.</u> , Vol. 6, (1994), pp. 865-873.	
	C5	SINDELAR, K et al. "Neurotropic and psychotropic agents", <u>Res. Inst. Pharm. Biochem.</u> , 1976, pp. 910-922, Vol. 41, No. 3. <u>Abstract only</u>	
	C6	ZLOTNIK et al. "Recent Advances in Chemokines and Chemokine Receptors" <u>Critical Reviews in Immunology</u> , 1999, pp. 1-47, Vol. 19	

Examiner Signature	<i>Mosher</i>	Date Considered	10-27-03
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		Number Kind Code ² (if known)			
MM	AA	3,379,729	04-23-1968	Protiva et al.	
	AB	5,665,362	09-09-1997	Inglis et al.	
	AC	5,753,476	05-19-1998	Jones et al.	
	AD	5,756,264	05-26-1998	Schwartz et al.	
	AE	5,824,318	10-20-1998	Mohr et al.	
	AF	5,948,775	09-07-1999	Koko et al.	
	AG	5,998,160	12-07-1999	Berens	
	AH	6,150,132	11-21-2000	Wells et al.	
	AI	US-6,420,121 B1	07-16-2002	Nelson et al.	

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		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				
MM	AJ	EP	0 277 773	A1	08-10-1988	The Board of Trustees of the Leland Stanford Junior University		
	AK	WO	98/02151	A2	01-22-1998	Leukosite, Inc.		<input type="checkbox"/>
	AL	WO	98/11073	A1	03-19-1998	Pharmacia & Upjohn Company		<input type="checkbox"/>
	AM	WO	00/00491	A1	01-06-2000	The Regents of the University of California		<input type="checkbox"/>
	AN	WO	02/18954	A2	03-07-2002	ChemoCentryx, Inc.		<input type="checkbox"/>

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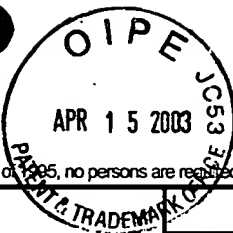
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1600/2900**OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
M M	AO	BRANCH, ANDREA D.; A good antisense molecule is hard to find; <i>TIBS</i> 23; February 1998; pp. 45-50;	
	AP	CROOKE, STANLEY T. et al.; <i>Antisense Research and Applications; Basic Principles of Antisense Therapeutics</i> ; chapters 1-3; pp. 1-53	
	AQ	CRYSTAL, RONALD G.; Transfer of Genes to Humans: Early Lessons and Obstacles to Success; <i>Science</i> ; pp. 404-410; 20 October 1995; Vol. 270;	
	AR	FRANCKEN, BART J.B., et al.; Human 5-Hydroxytryptamine _{2A} Receptors Activate Coexpressed G _i and G _o Proteins in <i>Spodoptera frugiperda</i> 9 Cells; <i>Molecular Pharmacology</i> ; pp. 1034-1044; May 2000; Vol. 57, No. 5	
	AS	HA, HUNJOO, et al.; Atherogenic lipoproteins enhance mesangial cell expression of platelet-derived growth factor: Role of protein tyrosine kinase and cyclic AMP-dependent protein kinase A; <i>J Lab Clin Med</i> ; pp. 456-465; May 1998; Vol. 131, No. 5	
	AT	KOYAMA, NORIYUKI, et al.; Heparan Sulfate Proteoglycans Mediate a Potent Inhibitory Signal for Migration of Vascular Smooth Muscle Cells; <i>Circulation Research</i> ; pp. 305-313; August 10, 1998; Vol. 83, No. 3	
	AU	KUNG, H.F., et al.; Dopamine D-2 Receptor Imaging Radiopharmaceuticals: Synthesis, Radiolabeling, and in Vitro Binding of (R)-(+)- and (S)-(-)-3-Iodo-2-hydroxy-6-methoxy-N-[(1-ethyl-2-pyrrolidinyl) methyl] benzamide; <i>Journal of Medical Chemistry</i> ; pp.1039-1042; 1988; Vol. 31, No. 5	
	AV	MANNING, WILLIAM C., et al.; Use of a recombinant murine cytomegalovirus expressing vesicular stomatitis virus G protein to pseudotype retroviral vectors; <i>Journal of Virological Methods</i> ; 1998; pp. 31-39; Vol. 73	
	AW	MCNALL, STEVEN J., et al.; Novel Serotonin Receptors in <i>Fasciola</i> . Characterization by Studies on Adenylate Cyclase Activation and [³ H]LSD Binding; <i>Biochemical Pharmacology</i> ; pp.2789-2797; 1984; Vol. 33, No. 17	
	AX	PADIA, J.K., et al; Design and Synthesis of Novel Nonpeptide CCK-B Receptor Antagonists; <i>Bioorganic & Medicinal Chemistry Letters</i> ; pp. 805-810; 1997; Vol. 7, No. 7	
	AY	PADIA, J.K., et al.; Novel Nonpeptide CCK-B Antagonists: Design and Development of Quinazolinone Derivatives as Potent, Selective, and Orally Active CCK-B Antagonists; <i>Journal of Medicinal Chemistry</i> ; pp. 1042-1049; 1998; Vol. 41, No. 7	
	AZ	PALÙ, GIORGIO, et al.; In pursuit of new developments for gene therapy of human diseases; <i>Journal of Biotechnology</i> ; pp. 1-13; 1999; Vol. 68	
	BA	SCHALL, T.J., et al.; Biology of the Rantes/SIS Cytokine Family; <i>Cytokine</i> ; pp. 165-183; May 1991; Vol. 3, No. 3	
✓	BB	SCHOFIELD, J.P., et al.; Non-viral approaches to gene therapy; <i>British Medical Bulletin</i> ; pp. 56-71; 1995; Vol. 51, No. 1	

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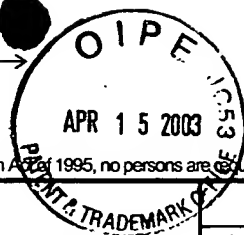
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Sheet 3 of 3**Complete if Known**

Application Number	09/944,049
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First Named Inventor	Schall, Thomas J., et al.
Art Unit	1648
Examiner Name	Mosher, Mary
Attorney Docket Number	019934-002510US

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Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
MM	BC	VERMA, INDER M., et al.; Gene therapy - promises, problems and prospects; <i>Nature</i> ; pp. 239-242; 18 September 1997; Vol. 389	
J	BD	WANG, T.S., et al.; A Simple Method of Preparation for [¹²³ I]-(S)-(-)-IBZM; <i>Applied Radiation and Isotopes</i> ; pp. 369-372; 1998; Vol. 49, No. 4	

Examiner Signature	<u>Mosher</u>	Date Considered	<u>10-27-03</u>
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		Number	Kind Code ² (if known)			
MM	AA	5,529,771		06-25-1996	Hooks et al.	
	AB	5,652,133		07-29-1997	Murphy	
	AC	5,720,957		02-24-1998	Jones et al.	
	AD	5,763,217		06-09-1998	Cynader et al.	
	AE	5,843,458		12-01-1998	Jones	
	AF	5,846,806		12-08-1998	Jones et al.	
	AG	5,866,136		02-02-1999	Ramshaw et al.	
	AH	5,908,780		06-01-1999	Jones	
	AI	5,939,320		08-17-1999	Littman et al.	
	AJ	5,965,697		10-12-1999	Czaplewski et al.	
	AK	6,028,169		02-22-2000	Kreider et al.	
	AL	6,031,080		02-29-2000	Williams, et al.	
	AM	6,033,671		03-07-2000	Frueh et al.	
	AN	6,034,102		03-07-2000	Aiello	
	AO	6,051,375		04-18-2000	Rose et al.	
	AP	6,051,428		04-18-2000	Fong et al.	

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MM	AQ	WO	94/11504	A1	05-26-1994	Genentech, Inc.		
	AR	WO	96/23068	A1	08-01-1996	Glaxo Group Limited		
	AS	WO	99/00510	A1	01-07-1999	Brigham and Women's Hospital		
	AT	WO	99/09178	A1	02-25-1999	Advanced Research and Technology Institute		
	AU	WO	99/27122	A1	06-03-1999	Transgene S.A.		abstract only
	AV	WO	99/36562	A1	07-22-1999	Human Gene Therapy Research Institute		
	AW	WO	99/36568	A2	07-22-1999	Anmelder und Erfinder		abstract only
	AX	WO	99/61472	A1	12-02-1999	Valentis, Inc.		

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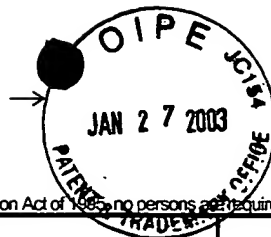
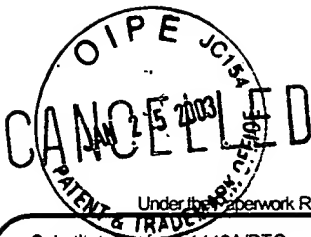
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MM	AY	WO	00/06203	A1	02-10-2000	Technion Research and Development Foundation Ltd.		
	AZ	WO	00/11950	A1	03-09-2000	Oregon Health Science University		
	BA	WO	00/34494	A1	06-15-2000	The Government of the United States of America (Department of Health and Human Services)		
	BB	WO	02/17900	A2	03-07-2002	ChemoCentryx, Inc.		
	BC	WO	02/17969	A2	03-07-2002	ChemoCentryx, Inc.		

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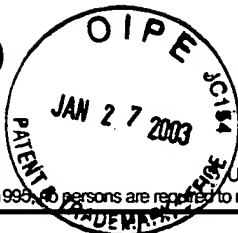
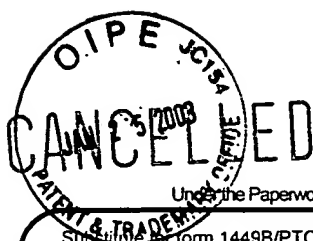
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MM	BD	BEISSER, PATRICK S., et al.; The R33 G Protein-Coupled Receptor Gene of Rat Cytomegalovirus Plays an Essential Role in the Pathogenesis of Viral Infection; <i>Journal of Virology</i> ; March 1998; pp. 2352-2363; Vol. 72, No. 3	
	BE	BEISSER, PATRICK S., et al.; Deletion of the R78 G Protein-Coupled Receptor Gene from Rat Cytomegalovirus Results in an Attenuated, Syncytium-Inducing Mutant Strain; <i>Journal of Virology</i> ; September 1999; pp. 7218-7230; Vol. 73, No. 9	
	BF	BEISSER, P.S., ET AL.; Viral Chemokine Receptors and Chemokines in Human Cytomegalovirus Trafficking and Interaction with the Immune System; <i>Current Topics in Microbiology and Immunology</i> ; 2002; pp. 203-234; Vol. 269; Springer, Berlin, DE; XP008009472	
	BG	BILLSTROM, MARCELLA A. et al.; Intracellular Signaling by the Chemokine Receptor US28 during Human Cytomegalovirus Infection; <i>Journal of Virology</i> ; July 1998; pp. 5535-5544; Vol. 72, No. 7	
	BH	BODAGHI, BAHRAM, et al.; Chemokine Sequestration by Viral Chemoreceptors as a Novel Viral Escape Strategy: Withdrawal of Chemokines from the Environment of Cytomegalovirus-Infected Cells; <i>J. Exp. Med.</i> ; September 7, 1998; pp. 855-866; Vol. 188, No. 5	
	BI	BORST, M.E., et al.; Development of a cytomegalovirus vector for somatic gene therapy; <i>Bone Marrow Transplantation</i> ; 2000; pp. S80-S82; Supp. 2	
	BJ	CHA, TAI-AN, et al.; Human Cytomegalovirus Clinical Isolates Carry at Least 19 Genes Not Found in Laboratory Strains; <i>Journal of Virology</i> ; January 1996; pp. 78-83; Vol. 70, No. 1	
	BK	CHEE, M.S., et al.; Analysis of the Protein-Coding Content of the Sequence of Human Cytomegalovirus Strain AD169; <i>Current Topics in Microbiology and Immunology</i> ; 1990; pp. 126-169; Vol. 154	
	BL	CHEE, M.S., et al.; Human cytomegalovirus encodes three G protein-coupled receptor homologues; <i>Nature</i> ; April 19, 1990; pp. 774-777; Vol. 344	
	BM	CRAIGEN, J.L., et al.; Human cytomegalovirus infection up-regulates interleukin-8 gene expression and stimulates neutrophil transendothelial migration; <i>Immunology</i> ; 1997; pp. 138-145; Vol. 92	
	BN	DAVIS-POYNTER, Nicholas J., et al.; Masters of deception: A review of herpesvirus immune evasion strategies; <i>Immunology and Cell Biology</i> ; 1996; pp. 513-522; Vol. 74	
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	BP	FARRELL, H.E., et al.; Inhibition of natural killer cells by a cytomegalovirus MHC class I homologue <i>in vivo</i> ; <i>Nature</i> ; April 3, 1997; pp. 510-514; Vol. 386	
BQ	FLEMING, PETER, et al.; The Murine Cytomegalovirus Chemokine Homolog, m131/129, Is a Determinant of Viral Pathogenicity; <i>Journal of Virology</i> ; August 1999; pp. 6800-6809; Vol. 73, No. 8		
BR	GAO, JI-LIANG; et al.; Human Cytomegalovirus Open Reading Frame US28 Encodes a Functional β Chemokine Receptor; <i>The Journal of Biological Chemistry</i> ; November 18, 1994; pp. 28539-28542; Vol. 269, No. 46		

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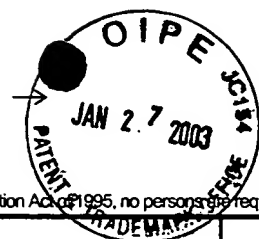
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Art Unit	1648
Examiner Name	Mosher, Mary
Attorney Docket Number	019934-002510US

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

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M, M	BS	GenBank Accession No: L20501; 2 May, 1996	
	BT	GenBank Accession No: AF073831; 23 June 2000	
	BU	GenBank Accession No: AF073832; 23 June 2000	
	BV	GenBank Accession No: AF073833; 23 June 2000	
	BW	GenBank Accession No: AF073834; 23 June 2000	
	BX	GenBank Accession No: AF073835; 23 June 2000	
	BY	GenBank Accession No.: X17403; 10 February 1999	
	BZ	GenBank Accession No.: X53293; 1 December 1992	
	CA	GILBERT, MARK J., et al.; Cytomegalovirus selectively blocks antigen processing and presentation of its immediate-early gene product; <i>Nature</i> ; 24 October 1996; pp. 720-722; Vol. 383	
	CB	GOMPELS, U.A.; et al.; The DNA Sequence of Human Herpesvirus-6: Structure, Coding Content, and Genome Evolution; <i>Virology</i> ; 1995; pp. 29-51; Vol. 209	
	CC	GRUNDY, JANE E., et al.; Cytomegalovirus-Infected Endothelial Cells Recruit Neutrophils by the Secretion of C-X-C Chemokines and Transmit Virus by Direct Neutrophil-Endothelial Cell Contact and during Neutrophil Transendothelial Migration; <i>The Journal of Infectious Diseases</i> ; 1998; pp. 1465-1474; Vol. 177	
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	CF	HUMAR A., et al.; Elevated Serum Cytokines Are Associated with Cytomegalovirus Infection and Disease in Bone Marrow Transplant Recipients; <i>The Journal of Infectious Diseases</i> ; 1999; pp. 484-488; Vol. 179	
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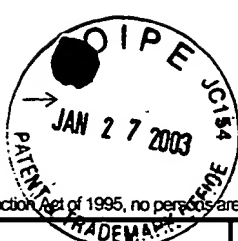
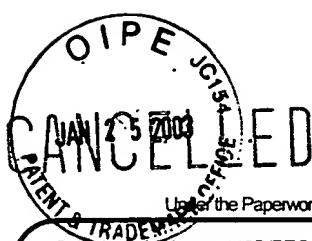
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Art Unit	1648
Examiner Name	Mosher, Mary
Attorney Docket Number	019934-002510US

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MM	CH	KLEDAL, THOMAS N., et al.; A Broad-Spectrum Chemokine Antagonist Encoded by Kaposi's Sarcoma-Associated Herpesvirus; <i>Science</i> ; 12 September 1997; pp. 1656-1659; Vol. 277	
	CI	KLEDAL, THOMAS N., et al.; Selective recognition of the membrane-bound CX ₃ C chemokine, fractalkine, by the human cytomegalovirus-encoded broad-spectrum receptor US28; <i>FEBS Letters</i> ; 1998; pp. 209-214; Vol. 441	
	CJ	KLEIJNEN, MAURITS F., et al.; A mouse cytomegalovirus glycoprotein, gp34, forms a complex with folded class I MHC molecules in the ER which is not retained but is transported to the cell surface; <i>EMBO Journal</i> ; 1997; pp. 685-694; Vol. 16, No. 4	
	CK	KOTENKO, SERGEI, et al.; Human cytomegalovirus harbors its own unique IL-10 homolog (cmvIL-10); February 15, 2000, pp. 1695-1700, Vol. 97, No. 4	
	CL	KUHN, DONALD, E., et al.; The Cytomegalovirus US28 Protein Binds Multiple CC Chemokines with High Affinity; <i>Biochemical and Biophysical Research Communications</i> ; June 6, 1995; pp. 325-330; Vol. 211, No. 1	
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	CN	MAHALINGAM, SURENDRAN, et al.; Chemokines and chemokine receptors in infectious diseases; <i>Immunology and Cell Biology</i> ; 1999; pp. 469-475; Vol. 77	
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	CV	NEOTE, KULDEEP, et al. Molecular Cloning, Functional Expression, and Signaling Characteristics of a C-C Chemokine Receptor; <i>Cell</i> ; February 12, 1993; pp. 415-525; Vol. 72	

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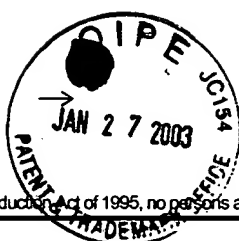
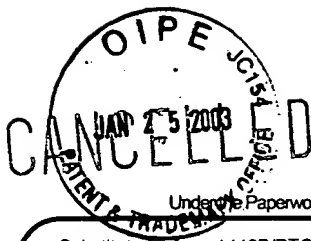
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<i>mm</i>	CW	NISHIYORI, ATSUSHI, et al.; Localization of fractalkine and CX ₃ CR1 mRNAs in rat brain: does fractalkine play a role in signaling from neuron to microglia?; <i>FEBS Letters</i> ; 1998; pp. 167-172; Vol. 429	
	CX	NORDØY, INGVID, et al.; Immunologic Parameters as Predictive Factors of Cytomegalovirus Disease in Renal Allograft Recipients; <i>The Journal of Infectious Diseases</i> ; 1999; pp. 195-198; vol. 180	
	CY	PASS, ROBERT F., et al.; A Subunit Cytomegalovirus Vaccine Based on Recombinant Envelope Glycoprotein B. and a New Adjuvant; <i>The Journal of Infectious Diseases</i> ; 1999; pp. 970-975; Vol. 180	
	CZ	PENFOLD, MARK E.T.; et al.; Cytomegalovirus encodes a potent α chemokine; <i>Proc. Natl. Acad. Sci. USA</i> ; August 1999; pp. 9839-9844; Vol. 96	
	DA	PLESKOFF, OLIVIER, et al; The Cytomegalovirus-Encoded Chemokine Receptor US28 Can Enhance Cell-Cell Fusion Mediated by Different Viral Proteins; <i>Journal of Virology</i> ; August 1998; pp. 6389-6397; Vol. 72, No. 8	
	DB	QUINNAN Jr., M.D., GERALD V., et al.; Comparative Virulence and Immunogenicity of the Towne Strain and a Nonattenuated Strain of Cytomegalovirus; <i>Annals of Internal Medicine</i> ; 1984; pp. 478-483; Vol. 101	
	DC	RAWLINSON, WILLIAM D., et al.; Analysis of the Complete DNA Sequence of Murine Cytomegalovirus; <i>Journal of Virology</i> ; December 1996; pp. 8833-8849; Vol. 70, No. 10	
	DD	REUSCH, UWE, et al.; A cytomegalovirus glycoprotein re-routes MHC class I complexes to lysosomes for degradation; <i>EMBO Journal</i> ; 1999; pp. 1081-1091; Vol. 18, No. 4	
	DE	REYBURN, HUGH T., et al.; The Class I MHC homologue of Human Cytomegalovirus inhibits attack by natural killer cells; <i>Nature</i> ; 3 April 1997; pp. 514-517; Vol 386	
	DF	ROLLINS, BARRETT J.; Chemokines; <i>Blood</i> ; August 1, 1997; pp. 909-928; Vol. 90, No. 3	
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	DH	SALLUSTO, FEDERICA, et al.; Chemokines and chemokine receptors in T-cell priming and Th1/Th2-mediated responses; <i>Immunology Today</i> ; December 1998; pp. 568-574; Vol. 19, No. 12	
	DI	SEOW, HENG-FONG; Pathogen interactions with cytokines and host defence: an overview; <i>Veterinary Immunology and Immunopathology</i> ; 1998; pp. 139-148; Vol. 63	
	DJ	SHELLAM, G.R.; The Potential of Murine Cytomegalovirus as a Viral Vector for Immunocontraception; <i>Reprod. Fertil. Dev.</i> ; 1994; pp. 401-409; Vol. 6	
	DK	STREBLOW, DANIEL N., et al.; The Human Cytomegalovirus Chemokine Receptor US28 Mediates Vascular Smooth Muscle Cell Migration; <i>Cell</i> ; November 24, 1999; pp. 511-520; Vol. 99	

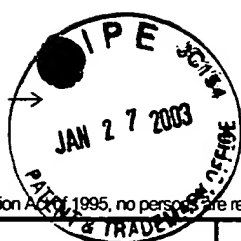
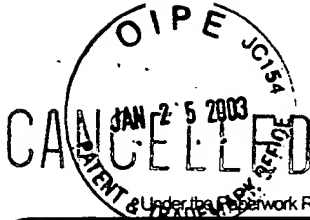
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mm	DL	SWISS-PROT Accession No. P16849; 1 August 1990	
	DM	THÄLE, REGINE, et al.; Identification and Expression of an Murine Cytomegalovirus Early Gene Coding for an Fc Receptor; <i>Journal of Virology</i> ; December 1994; pp. 7757-7765; Vol. 68, No. 12	
	DN	TOMASEC, PETER, et al.; Surface Expression of HLA-E, an Inhibitor of Natural Killer Cells, Enhanced by Human Cytomegalovirus gpUL40; <i>Science</i> ; February 11, 2000; pp. 1031-1033; Vol. 287	
	DO	VIEIRA, JEFFREY, et al.; Functional Analysis of the Human Cytomegalovirus US28 Gene by Insertion Mutagenesis with the Green Fluorescent Protein Gene; <i>Journal of Virology</i> ; October 1998; pp. 8158-8165; Vol. 72, No. 10	
	DP	WARD, STEPHEN G., et al.; Chemokines and T Lymphocytes: More than an Attraction; <i>Immunity</i> ; July 1998; pp. 1-11; Vol. 9	
	DQ	ZIEGLER, HEIKE, et al.; A mouse Cytomegalovirus Glycoprotein Retains MHC Class I Complexes in the ERGIC/cis-Golgi Compartments; <i>Immunity</i> ; January 1997; pp. 57-66; Vol. 6	

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